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PHOTOGRAPHIC INTERPRETATION REPORT

MISSILE INSTALLATION NEAR LIEN-SHAN, CHINA

NPIC/R-147/62
October 1962

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

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PREFACE

This photographic interpretation report, prepared under NPIC Project JN-207/62 in response to requirements DIAXX-22-62 and CIA/OSI/R-194/62, is based primarily on CHURCH DOOR Mission [redacted] Supplementary and comparative material was taken from KEYHOLE [redacted] and US photography of [redacted]

25X1A 25X1A 25X1D

All structural measurements are given to the nearest 5 feet. Geographic coordinates and distances between installations were obtained by accurate plotting on available mosaics and maps.

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SUMMARY

Through detailed analysis of recent CHURCH DOOR photography, an installation southeast of Lien-shan, China, has been identified as a missile launch installation. This installation, first observed on KEYHOLE photography of [redacted], consists of a missile launch area (having one definite and one possible launch position), a support area, and a housing and administrative area. The general layout and the support facilities are typical of missile installations. However, the launch-position configuration cannot be associated with that of any known SAM, MRBM, or ICBM launch [redacted]

25X1A 25X1B

DETAILS

25X1D

The missile installation, situated in a mountainous area along the northern coast of the Gulf of Liaotung, is located at 40-42N 120-52E, 3.7 nm southeast of Lien-shan and 27 nm south-southeast of Chin-chou (Figure 1). The installation is served by a spur rail line which branches at Lien-shan from the Pei-ning (Pei-ping-Liaoning) Railroad, passes through part of the Housing and Administrative Area, and terminates in the Support Area. A road which formerly served a now abandoned petroleum-storage area has been extended and improved and constitutes the primary access road to the installation. Secondary roads connect the installation with the town of Hu-lu-tao and the nearby port facility, to the east. As shown by photography of [redacted] neither the installation nor the spur line were in existence then.

25X1D

Since World War II, only one KEYHOLE [redacted], has covered the Lien-shan area. On that photography the installation appears in its present form (Figure 2), but the small scale precludes a detailed photographic comparison with the CHURCH DOOR mission. Details of the three areas of the missile installation follow.

25X1A

MISSILE LAUNCH AREA

The Missile Launch Area (Figure 3) contains one and possibly two launch positions, seven missile transporters, several radars, and numerous buildings. The area is connected by an improved road to the Support Area, 2 nm to the west-northwest. The road is [redacted] wide and has wide-radius turns.

The definite missile launch position, located at 40-41-30N 120-55-10E, is generally circular and is 75 feet in diameter. In its center is an inclined launcher approximately 35 feet long, whose long axis is oriented on an azimuth of approximately 105 degrees. The launcher configuration indicates that it is capable of rotating. Adjacent to the position are two bunkers, one on the north edge and the second 100 feet northwestward, fronting on the loop access road serving the position. An unidentified object is located in front of the second bunker. Two missile transporters were near the position at the time of photography: one parked on the road to the east and the other moving away from the position.

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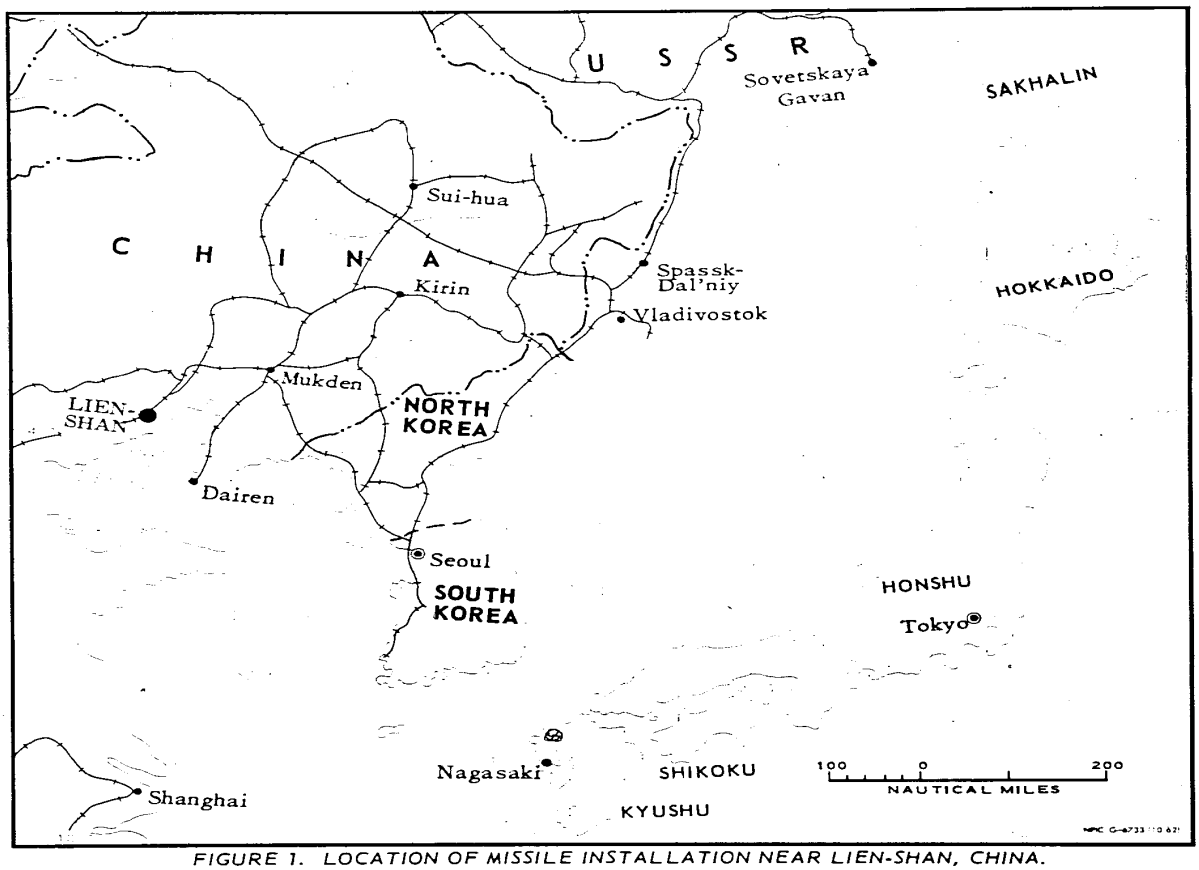

FIGURE 1. LOCATION OF MISSILE INSTALLATION NEAR LIEN-SHAN, CHINA.

Six unidentified buildings in two groups lie 575 and 1,100 feet, respectively, east of the launch position. An unidentified and possibly unrelated building lies 575 feet southwestward. Radars have been identified in two locations. In a wooded area 270 feet north of the launch position are an unidentified radar-equipped van and a possible radar. At a point 550 feet northwest of the launch position is a bunker with an apron and three radar vans, two of the Whiff type and the third unidentified. On a ridge 1,000 feet north-northwest of the launch position are four buildings that are possibly associated with the radar sites, since ground scars indicate possible wire or cable connections. Just west of the buildings is a possible building construction site.

At a point 800 feet southwest of the launch position and north of the main access road is a loop road, on the western part of which five missile transporters are parked. Along its

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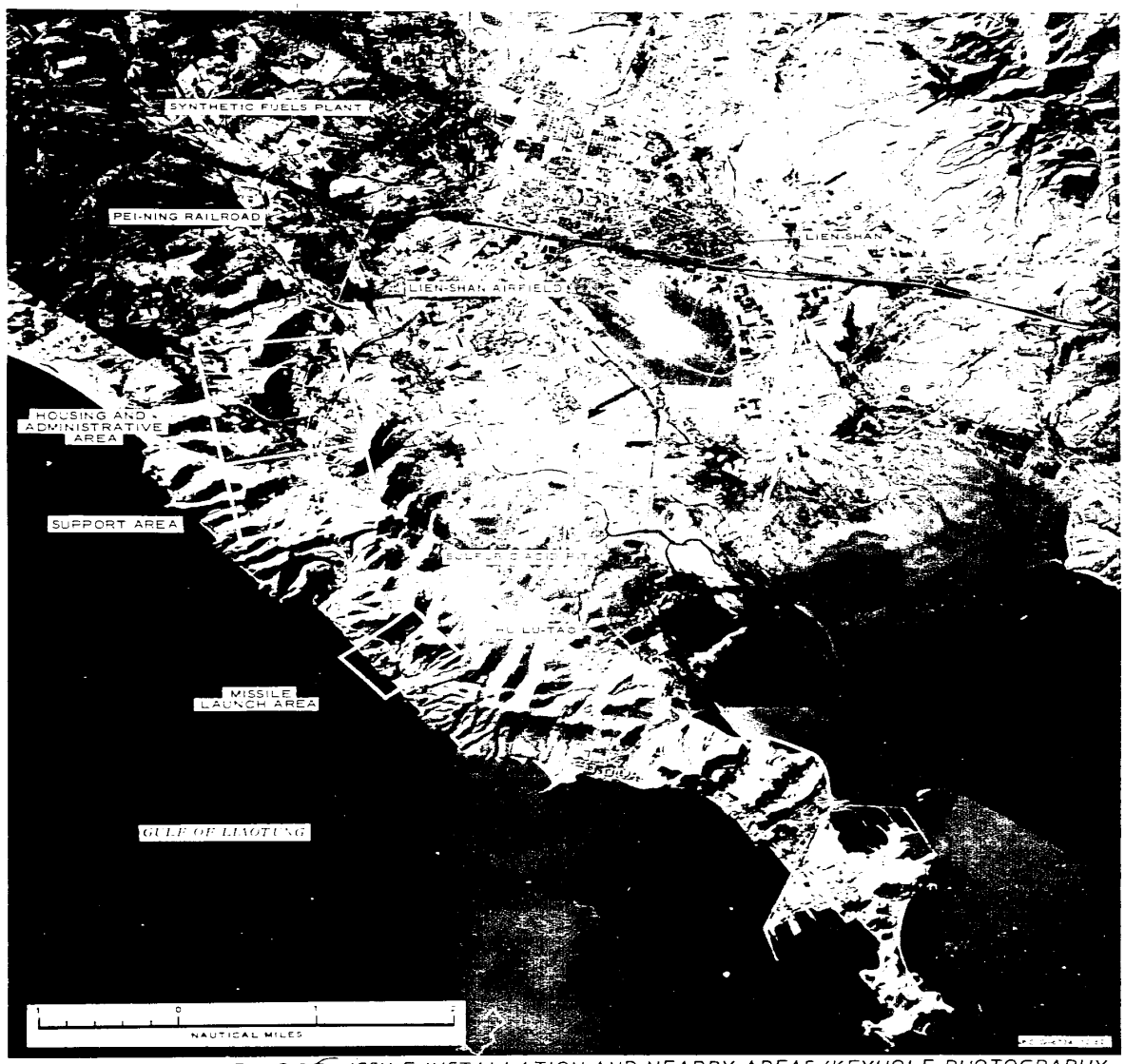

FIGURE 2. COMPONENTS OF MISSILE INSTALLATION AND NEARBY AREAS (KEYHOLE PHOTOGRAPHY [redacted]. The interpretation in this report is based primarily on [redacted] CHURCH DOOR photography.

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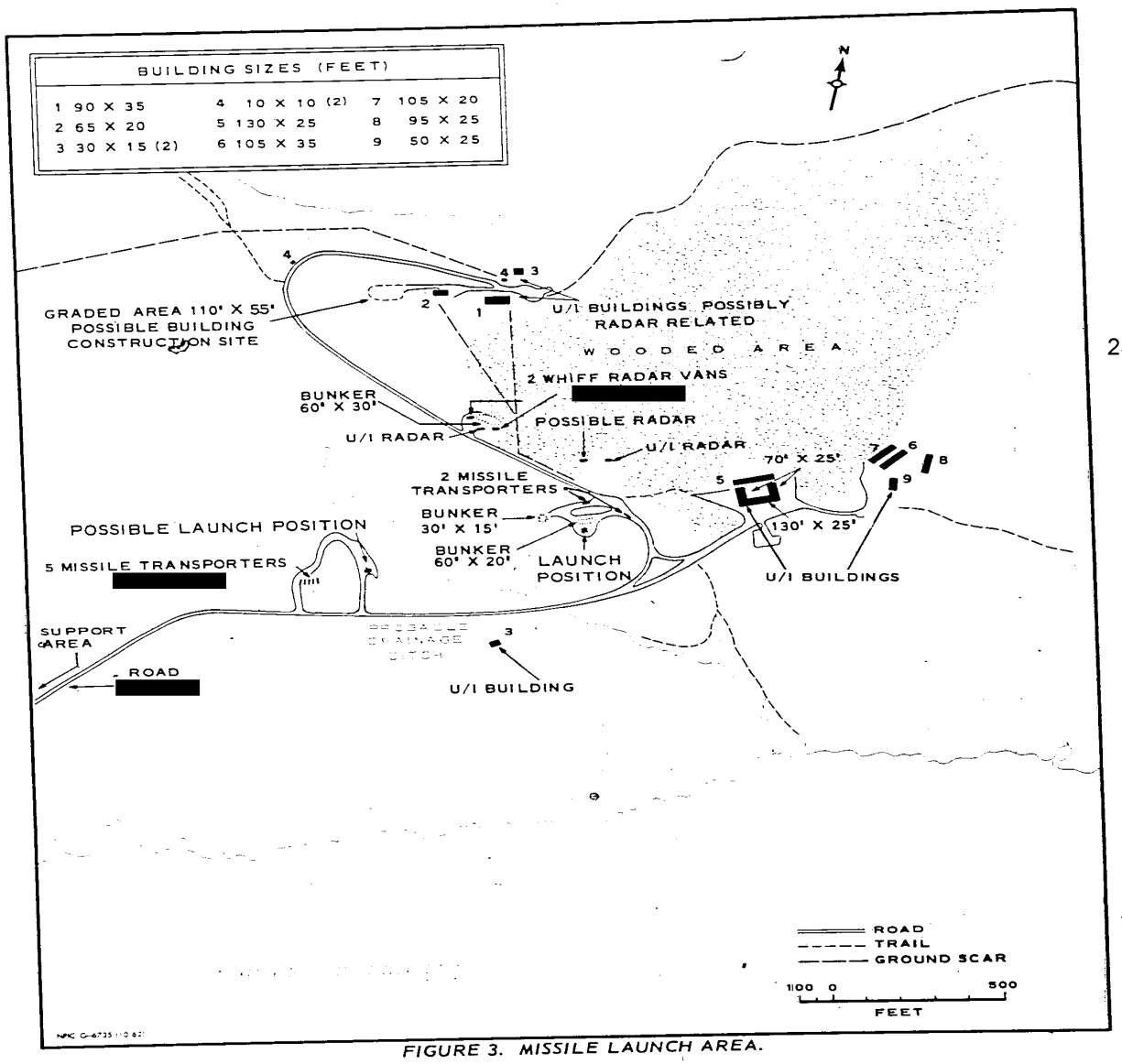

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FIGURE 3. MISSILE LAUNCH AREA.

eastern part is a possible launch position with an inclined unidentified object about 35 feet long which resembles the launcher in the center of the definite launch position. The long axis of this object is oriented on an azimuth of approximately 145 degrees.

SUPPORT AREA

The Support Area is located in a long narrow valley and generally in the center of the missile launch installation. It has three functional divisions: The Operational Support Facility, the Storage Facility, and the Logistic Support Facility (Figure 4). The area is served by a continuation, from the Housing and Administrative Area, of the spur that branches from the Peining rail line. This spur divides into two sidings that terminate in the area.

Operational Support Facility

The major items within this facility are four drive-through buildings, a large concrete hardstand, a Fagot/Fresco parked on a small apron, a large circular bunker, and a network of very good loop roads. The Fagot/Fresco is parked at the entrance of a building (item A) that has a flame bucket or blast deflector at its back end. The aircraft was probably brought in disassembled from a nearby airfield by road or rail and then reassembled.

The long axes of the two large drive-through buildings (items B and C) are in alignment. The function of these buildings has not been determined; however, one of them (item C) is the same size as one of the large drive-through buildings at Shuang-ch'eng-tzu Airfield, a building tentatively associated with an air-to-air missile system. The two buildings are nearly the same in size and configuration as numerous buildings identified at the Kapustin Yar/Vladimirovka and Tyura Tam missile test centers.

The two smaller drive-through buildings (items D and E) are very similar in size and configuration -- and in the case of item E in the loop road system -- to four buildings involved in the final checkout of surface-to-surface missiles (SSMs): two at Kapustin Yar Launch Complex C and one each in Launch Complexes A and C of the Shuang-ch'eng-tzu Missile Test Center. However, no SSM launch pad has been observed in the Lien-shan installation. The hardstand (item F) located approximately 500 feet to the east would not be utilized as a launch pad because of the lack of supporting elements such as vehicle or equipment revetments and control bunkers and because of its proximity to adjoining facilities.

The large road-served, earth-mounded structure (item G) was present on photography of [redacted] At that time it was used as a liquid-storage tank, as were the four abandoned derelict tanks to the west.

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Logistic Support Facility

This facility contains 12 single-story buildings used for storage, for vehicle and equipment maintenance, and as garages; a small heat or power plant; and a transfer point. Twenty-one cargo semitrailers, 3 Whiff radar vans, 2 missile transporters, 3 prime movers, 2 possible trailers, and at least 15 trucks and trailers have been identified throughout the facility.

The transfer point consists of a hardstand measuring about 250 by 70 feet on which are several small crates or bundles of material. Transshipment is accomplished by side-loading to and from the nearby dead-end spur. Vehicles and other mobile equipment may be end-loaded at another spur which dead-ends near the center of the facility.

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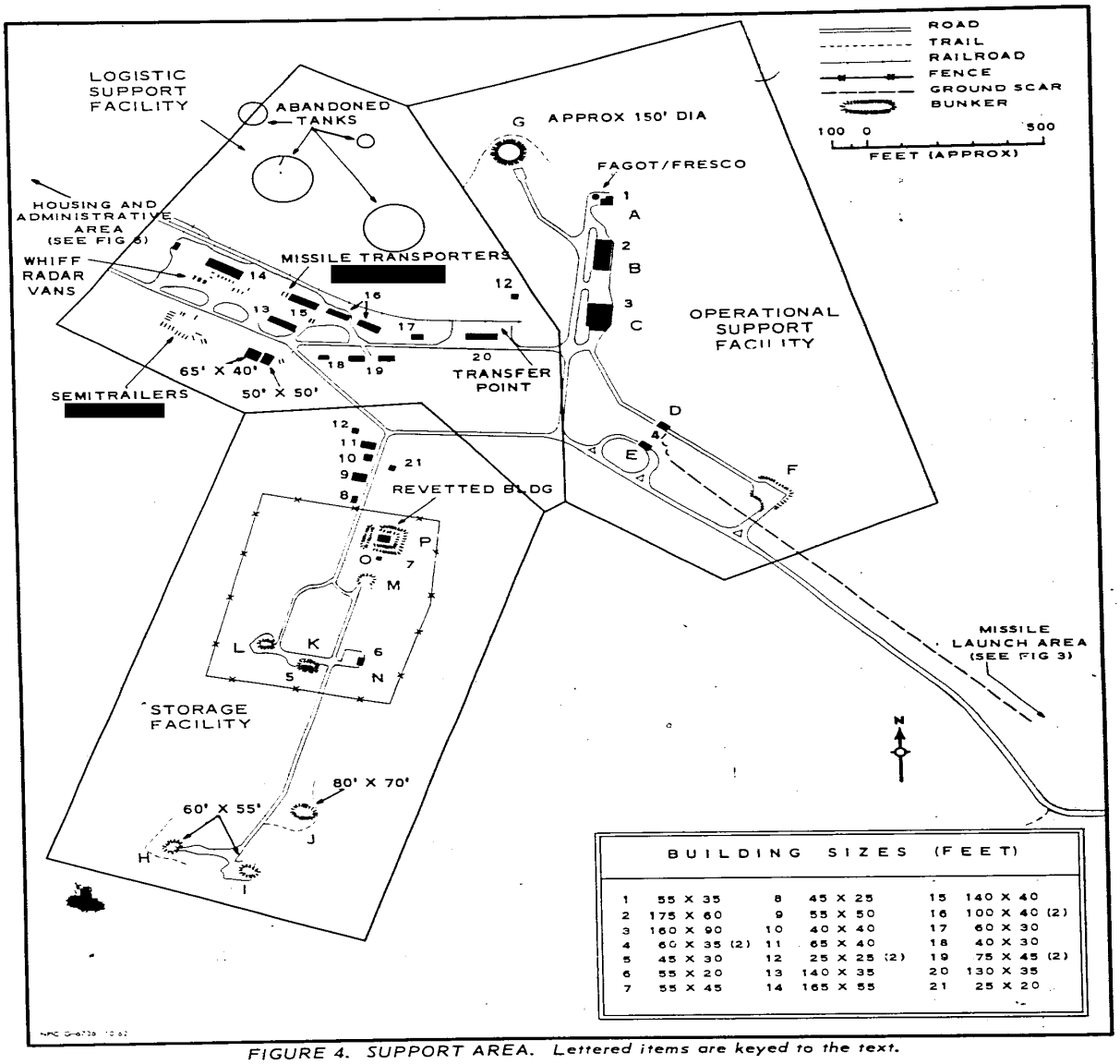

BUILDING SIZES (FEET)					
1	55 X 35	8	45 X 25	15	140 X 40
2	175 X 60	9	55 X 50	16	100 X 40 (2)
3	160 X 90	10	40 X 40	17	60 X 30
4	60 X 35 (2)	11	65 X 40	18	40 X 30
5	45 X 30	12	25 X 25 (2)	19	75 X 45 (2)
6	55 X 20	13	140 X 35	20	130 X 35
7	55 X 45	14	165 X 55	21	25 X 20

FIGURE 4. SUPPORT AREA. Lettered items are keyed to the text.

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25X1D

Storage Facility

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The only security fence in the entire missile installation encloses the major part of the Storage Facility. This facility, although built since [redacted] appears to be older than any other part of the missile installation. In the southern part, outside the fenced section, are three large earth-mounded bunkers (items H-J). The entrances to the bunkers are not served by well-prepared roadways such as those throughout the rest of the area. Yet two of the bunkers (items I and J) each have two overhead handling rails extending out from the entrance, indicating that whatever is stored in them must be handled by truck.

The fenced section contains a drive-through bunker (item K), two earth-mounded bunkers (items L and M), a single-story building (item N) with two handling rails extending from over the entrance, a very small building (item O) accessible only to personnel, and an adjacent heavily revetted building (item P). The walls of the earthen revetment measure approximately 45 feet thick and are beveled to a point slightly higher than the single-story building they enclose. The outside dimensions of the revetment measure 145 by 125 feet. Across the opening is a beveled earthen blast wall 145 by 125 feet. This revetment is nearly identical with the one in Kapustin Yar Launch Complex G (in the Missile Storage and Handling Area). The Complex G revetment, 200 by 145 feet with walls 40-45 feet thick, and enclosing a building 25 feet square, is associated with warhead storage.

Along the entry road north of the fenced section are six single-story buildings, none road served, ranging in size from 65 by 40 feet to 25 by 20 feet. One building is a guardhouse. At the time of the [redacted] photography, the north gate was closed and the south, open.

The types of materials stored in this facility have not been determined. However, the volume of space available seems more than adequate for a cruise-type missile installation of the proportions now present.

HOUSING AND ADMINISTRATIVE AREA

This area is located in the northwest portion of the missile installation, approximately 3 nm south of Lien-shan, and is connected by a good hard-surfaced road to the Support Area. The area consists of three housing sections, an administrative headquarters, one large and one small motor pool, and an area of construction activity, all interconnected by road (Figure 5).

Housing Section 1 contains 17 barracks and support-type buildings, 2 administrative buildings, a heat/power plant, and 8 unidentified vehicles or pieces of equipment. Part of this section may be used as a school, since the building layout differs from that of the usual military installation in this part of China.

The Administrative Headquarters contains a large modified C-shaped building, four support buildings, and a probable heating plant. Motor Pool 1 includes 17 buildings: 2 vehicle sheds, 2 barracks-type buildings, 11 probable storage buildings, and 2 unidentified buildings. At least 12 trucks (mostly open-bed) and 10 possible trailers are visible. A cable scar runs to the Administrative Headquarters. Across the road are four small storage buildings and several piles of material.

Housing Section 2 contains 4 large and 2 small buildings and 3 outdoor basketball courts. It is connected by cable scar to the Administrative Headquarters. In Motor Pool 2 are 2 small buildings, 6 probable tracked vehicles, 4 open-bed trucks, at least 12 unidentified vehicles, and numerous pieces of unidentifiable equipment. East-southeast is an area of excavation, as

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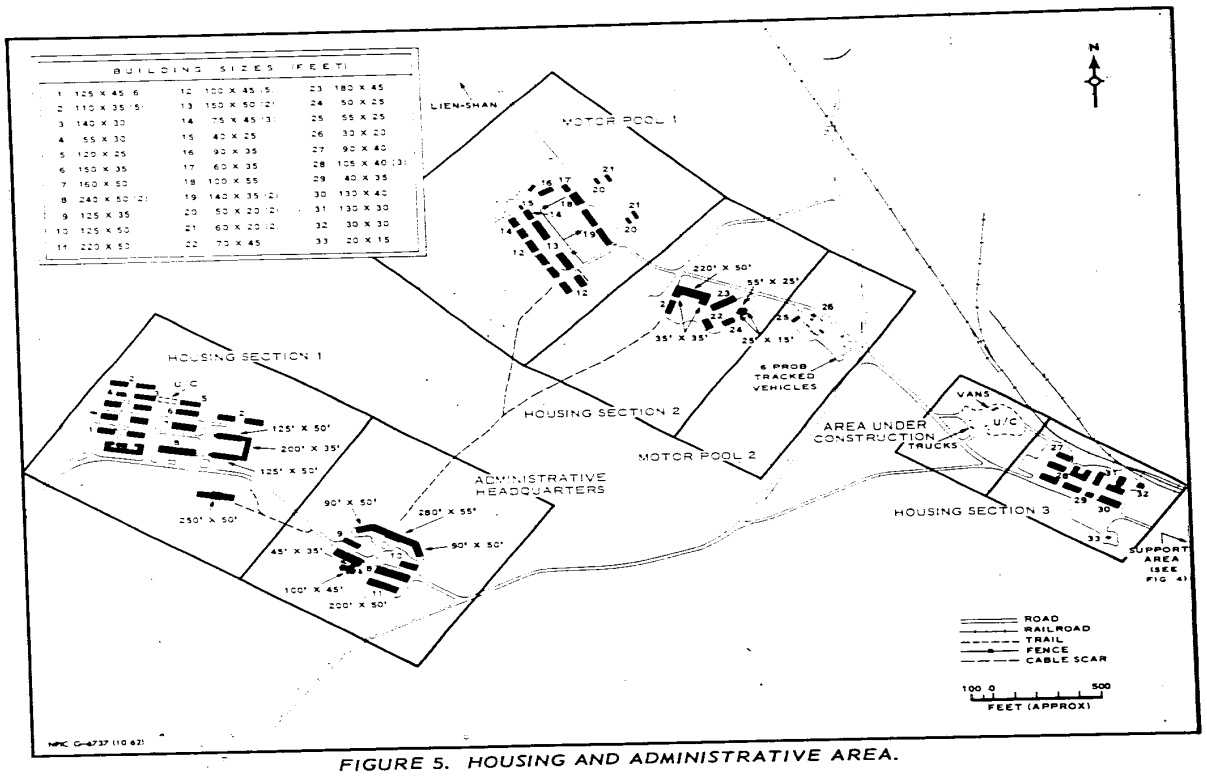

FIGURE 5. HOUSING AND ADMINISTRATIVE AREA.

evidenced by ground scarring, containing 5 open-bed trucks and 4 possible vans. Housing Section 3 contains ten buildings, including a heating plant and a probable mess hall. On its western side is a basketball court and on the southwestern side, across the road, is a large athletic area with several playing fields.

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REFERENCES

PHOTOGRAPHY

Mission	Date	Pass	Camera	Frames	Classification
[redacted]					

25X1D

25X1C

MAPS OR CHARTS

ACIC. ONC 289 (Gulf of Liaotung), 1st ed, Aug 58, scale 1:1,000,000 (CONFIDENTIAL)

ACIC. ONC 381 (Shantung Peninsula), 1st ed, 1958, scale 1:1,000,000 (CONFIDENTIAL)

SAC. US Air Target Chart, Series 200, Sheet 0289-24A, 1st ed, Jun 59, scale 1:200,000 (SECRET)

AMS. Manchuria, Series 1542, Sheet NK 51-10 (Lien-shan), 2d ed, Jul 58, scale 1:250,000 (UNCLASSIFIED)

ACIC. US Air Target Mosaic, Series 50, Sheet 0289-24/3MA, 1st ed, Jun 61, scale 1:50,000 (SECRET)